Claims 37 through 72 now define the invention in terms of a hand-held printer.

The prior art referred to in the last Office Action was primarily Fukumoto et al (U.S. 5,047,615) and Austin et al (U.S. 6,068,420), McKinnon et al (U.S. 6,202,642), Schultz et al (U.S. 5,679,943), Sherman et al (U.S. 5,110,226) and Goodwin et al (U.S. 5,486,259).

Claim 37 and claims 38 through 56 dependent directly or indirectly thereon are submitted to be patentable over the references of record. Claim 37 defines a comprehensive combination not suggested by the prior art. The primary Fukumoto et al reference does not disclose an electrical connector on the housing for connection to a data entry device, nor the connector is disposed between the front portion and a roll-mounting space. The primary Fukumoto et al reference also fails to disclose a releasable latch to latch a portable data entry device in the compartment of a printer housing. The primary reference also fails to disclose a compartment which is open at the end of the front portion to enable a portable data entry device to be slidably received through the open end. Also, the primary reference fails to teach flanges at opposite sides of the housing to embrace a portable data entry device. Any rejection of claim 37 would be based on hindsight in view of applicants' own disclosure. The Examiner has heretofore relied upon several secondary, tertiary, etc. references but these do not fairly satisfy the deficiencies of the Fukumoto et al reference. The

Austin et al patent shows a printer 24 screwed to the end of a portable data entry device 12. In Schultz et al, the portable data entry device or terminal appears to disclose a jack 108 for connection to a printer 110, but the connector (not shown) on the printer 110 is not between the front portion and any roll mounting space (note the location of the paper 93, and column 8, lines 7 and 8). Any rejection of claim 37 and claims dependent thereon would be based on hindsight.

With respect to claim 38, Fukumoto et al do not disclose a palm-receiving portion which is contoured and concave, or contoured as set forth in claim 39, nor with a strap as claimed in claims 40 and 42. Claim 41 is even further from the teachings of Fukumoto et al. Co-owned Goodwin et al patent does disclose a pair of opposed substantially mirror-image housing sections (with respect to claim 43), but do not disclose that each housing section includes a flange (wherein the flanges help embrace a portable data entry device). Claim 44 dependent on claim 43 defines that a printer printed circuit board is supported by such housing sections, even further from the Goodwin et al disclosure. Claim 45 defines that the print module is mounted on the printer circuit board. In Sherman et al '226, the printer mechanism is mounted on mounting bosses, not on the printer circuit board 36. The bosses protrude through the printer circuit board (column 4, last line through Column 5, line 4). With respect to claims 46 through 49, McKinnon et al disclose electronic monitoring apparatus and method

wherein a plurality of batteries are mounted to a circuit board, but there is no teaching of a printer printed circuit board. Further with respect to claim 49, the applied references do not teach mounting the claimed print module on a printer circuit board. Claim 50 specifies a feature that the printer weighs less than 16 ounces, relevant to a hand-held device. Claims 51 and 52 recite the platen roll in a user-friendly construction. Claim 53 recites parameters of proportion of the claimed printer. Claim 55 defines the location of the palm-receiving portion with respect to the front and rear portions, even further definitive over Fukumoto et al where the user grasps the front portion of the printer housing. Claim 56 defines the printer in combination with a portable data entry device in a comprehensive combination.

With respect to claim 57, there is defined at least one battery on the printer printed circuit board, and a thermal print head and an electric motor being mounted to the printer circuit board. This simple structure makes for a compact, easy to manufacture unit. No patent, as explained above, discloses the combination claimed in claim 57.

In dependent claim 58, it is noted that in Fukumoto et al the sides of the data entry device are not embraced by the compartment.

The references do not disclose the combination claimed in claim 59, particularly not the claimed separators secured to a printer circuit board. No patent teaches the comprehensive combination claimed in

claim 60, and certainly Fukumoto et al does not teach an electrical connector at the rear of the compartment.

Claim 61 defines, inter alia, an elongate housing having a front portion with an open-ended channel-shaped compartment, a printer circuit board, and a thermal print head and an electric motor mounted to the rear portion of the printer circuit board, not taught by the references.

Claim 62 defines, inter alia, that the print head and the electric motor are mounted on the printer circuit board, of which the prior art is devoid. In Austin et al the electric motor 46 appears to be mounted on media receptacle 28.

Claim 63 defines, inter alia, the combination of a hand-held printer and a portable data entry device, wherein a printer housing has a front portion with an open-ended channel-shaped compartment adapted to slidably receive the data entry device and embrace the data entry device. The compartment is defined as having opposed flanges, a printer circuit board disposed in the printer housing, and a thermal print head and an electric motor mounted to the printer circuit board at the rear portion of the printer housing. No patent applied by the Examiner teaches this claimed combination.

Claim 64 defines a combination of a portable data entry device and a hand-held printer having certain features referred to above in connection with claim 63. The references fail to teach the invention

claimed in claim 1, particularly not the primary Fukumoto et al reference.

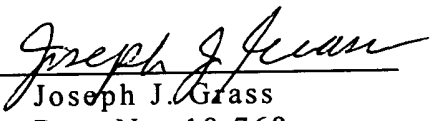
Claim 65 is submitted to be allowable for reasons expressed with respect to claim 62.

Claim 66 defines a hand-held printer with an open-ended channel shaped compartment, wherein a housing has a pair of opposed connected substantially mirror-image housing sections, and an electric motor mounted to the printer circuit board. No patent of record teaches this comprehensive combination. Claims 67 and 68 further define the relationship between the housing section and the printer circuit board.

Claim 69 defines, inter alia, the mirror-image housing sections with embracing flanges, and a print head and an electric motor mounted on the printer circuit board. Claims 70 and 71 further define the relationship between the housing sections and the printer circuit board. Claim 72 defines, inter alia, the housing with the substantially mirror-image connected housing sections, the printer printed circuit

board, wherein the battery and the electric motor are mounted on the printer circuit board. No patent of record teaches such a combination.

Respectfully submitted,

By 
Joseph J. Grass
Reg. No. 19,768
Attorney of Record

August 23, 2002
Dayton, Ohio
Area Code 937
865-2012

EXHIBIT A

37. A hand-held printer, comprising: an elongate printer housing having a portion to receive the palm of the user's hand, the housing having a front portion and a rear portion, a platen roll at the rear portion, the printer housing including a channel and flanges at opposite sides of the housing providing a compartment to embrace a portable date entry device, an electrical connector on the housing for connection to the data entry device, the housing providing space for mounting a roll of a printable web, a print module at the rear portion of the printer housing, the connector being disposed between the front portion and the roll-mounting space, the print module including a thermal print head cooperable with the platen roll for printing on the web and an electric motor for moving the platen roll, a releasable latch to latch the portable data entry device in the compartment of the printer housing, the compartment having an open top between the flanges to provide access to the portable data entry device, the compartment being open at the end of the front portion to enable a portable data entry device to be slidably received through the open end.

38. A hand-held printer as defined in claim 37, the palm-receiving portion being contoured and concave.

39. A hand-held printer as defined in claim 37, the palm-receiving portion being contoured.

40. A hand-held printer as defined in claim 39, including a strap adjacent the contoured portion.

41. A hand-held printer as defined in claim 37, wherein the palm-receiving portion of the printer housing is concave between the front portion and the rear portion.

42. A hand-held printer as defined in claim 37, including a strap connected to the printer housing and capable of passing around the back of the user's hand.

43. A hand-held printer as defined in claim 37, the housing having a pair of opposed substantially mirror-image housing sections, wherein each housing section includes one of the flanges.

44. A hand-held printer as defined in claim 43, including a printer printed circuit board supported by the housing sections.

45. A hand-held printer as defined in claim 37, wherein the print module is mounted on the printer circuit board.

46. A hand-held printer as defined in claim 45, wherein at least one battery is mounted on the printer circuit board.

47. A hand-held printer s defined in claim 37, wherein at least one battery is mounted on the printer circuit board.

48. A hand-held printer as defined in claim 37, including a printer printed circuit board supported within the housing, and wherein at least one battery is mounted on the printer circuit board.

49. A hand-held printer as defined in claim 37, including a printer printed circuit board supported within the housing, wherein the print module is mounted on the printer circuit board, and wherein at least one battery is mounted on the printer circuit board.

50. A hand-held printer as defined in claim 37, wherein the printer weighs less than 16 ounces.

51. A hand-held printer as defined in claim 37, wherein the platen roll is pivotally mounted toward and away from the print head.

52. A hand-held printer as defined in claim 37, wherein the housing includes a cover, and wherein the platen roll is pivotally mounted to the cover.

53. A hand-held printer as defined in claim 37, wherein the printer housing length is at least twice as great as the width.

54. A hand-held printer as defined in claim 37, wherein the platen roll forms part of the print module.

55. A hand-held printer as defined in claim 37, wherein the palm-receiving portion is disposed between the front and rear portions.

56. A hand-held printer as defined in claim 37, in combination with a portable data entry device.

57. A hand-held printer, comprising: an elongate housing having a front portion with a compartment adapted to receive a data entry device, the housing further having a rear portion, a platen roll, a printer printed circuit board disposed in the housing, at least one battery on the printer printed circuit board at the front portion of the housing, and a thermal print head and an electric motor for driving the platen roll being mounted to the printer circuit board.

58. A hand-held printer as defined in claim 57, wherein the compartment is shaped to overlie embracingly the sides of a data entry device, the compartment having an open top and an open front end, and an electrical connector at the rear of the compartment for connection to a data entry device.

59. A portable printer as defined in claim 57, wherein there are a plurality of adjacent batteries, a separator between each pair of adjacent batteries, and the separators being secured to the printer circuit board.

60. A hand-held printer as defined in claim 57, wherein the compartment has an open top, and an electrical connector at the rear of the compartment for connection to a data entry device.

61. A hand-held printer, comprising: an elongate housing having a front portion with an open-ended channel-shaped compartment adapted to slidably receive a data entry device through the open end of the compartment, the compartment having a substantially open top

portion, the housing further having a rear portion, a printer printed circuit board disposed in the housing, the printer circuit board having a front portion and a rear portion, and a thermal print head for printing on a web and an electric motor for driving the platen roll mounted to the rear portion of the printer circuit board.

62. A hand-held printer, comprising: an elongate housing having a front portion and a rear portion, the front portion having a compartment adapted to receive a data entry device, a thermal print head and a cooperating platen roll disposed at the rear portion, an electric motor for the platen roll, a printer printed circuit board in the housing, and the print head and the electric motor being mounted on the printer circuit board.

63. In combination: a hand-held printer and a portable data entry device connected thereto, the portable data entry device including an elongate data entry device housing having a front end, a scanner disposed on the front end of the data entry device housing for scanning a code, a display and a plurality of manually operable keys, the printer including an elongate printer housing having a front portion with an open-ended channel-shaped compartment adapted to slidably receive the data entry device through the open end of the compartment and to embrace the data entry device, the scanner being capable of receiving data through the open end of the compartment and to embrace the data entry device, the compartment having opposed flanges and a

substantially open top portion to enable access to the display and the keys, the printer housing further having a rear portion, a platen roll at the rear portion, a printer printed circuit board disposed in the printer housing, and a thermal print head and an electric motor for the platen roll mounted to the printer circuit board at the rear portion of the printer housing.

64. In combination: a hand-held printer and a portable data entry device connected thereto, the portable data entry device including a data entry device housing having a front end, a scanner disposed on the front end of the data entry device housing for scanning a code, a display and a plurality of manually operable keys, the printer including an elongate printer housing having a front portion and a rear portion, the front portion having a compartment adapted to receive the data entry device, a thermal print head and a cooperating rotatable platen roll disposed at the rear portion, an electric motor for the platen roll, a printer printed circuit board in the printer housing, and the print head and the electric motor being mounted on the printer circuit board at the rear portion of the printer housing.

65. In combination: a hand-held printer and a portable data entry device connected thereto, the portable data entry device including a data entry device housing having a front end, a scanner disposed on the front end of the data entry device housing for scanning a code, a display and a plurality of manually operable keys, the printer

including an elongate printer housing having a front portion with a compartment adapted to receive the data entry device, the housing further having a rear portion, a printer printed circuit board disposed in the housing, at least one battery on the printer circuit board at the front portion of the printer housing, a driven platen roll, a thermal print head and an electric motor for the platen roll, and the thermal print head and the electric motor being mounted to the printer circuit board at the rear portion of the printer housing.

66. A hand-held printer, comprising: an elongate housing having a front portion with an open-ended channel-shaped compartment adapted to slidably receive a data entry device through the open end of the compartment, the compartment having a substantially open top portion, the housing having a pair of opposed connected substantially mirror-image housing sections, the housing further having a rear portion, an elongate printer printed circuit board disposed in the housing and supported by the housing sections, the printer circuit board having a front portion and a rear portion, a thermal print head mounted to printer circuit board, a driven platen roll cooperable with the print head for printing on the web, and an electric motor for the platen roll mounted to the printer circuit board.

67. A hand-held printer as defined in claim 66, wherein the mirror-image housing sections receive the printed circuit board.

68. A hand-held printer as defined in claim 66, wherein the mirror-image housing sections include slots which receive the printer circuit board.

69. A hand-held printer, comprising: an elongate housing having a front portion and a rear portion, the front portion having a compartment adapted to receive a data entry device, the housing having a pair of opposed substantially mirror-image housing sections with flanges for overlying and embracing a portable data entry device, a thermal print head and a cooperating platen roll disposed at the rear portion, a printer printed circuit board supported by the housing sections, a driven platen roll, an electric motor for the platen roll, and wherein the print head and the electric motor are mounted on the printer circuit board.

70. A hand-held printer as defined in claim 69, wherein the mirror-image housing sections receive the printed circuit board.

71. A hand-held printer as defined in claim 69, wherein the mirror-image housing sections include slots which receive the printer circuit board.

72. A hand-held printer, comprising: an elongate housing having a front portion with a compartment adapted to receive a portable data entry device, the housing further having a rear portion, the housing providing space for receiving a roll of a printable web, the housing having a pair of opposed substantially mirror-image connected

housing sections, a printer printed circuit board disposed in the housing and supported by the housing sections, a driven platen roll, an electric motor for the platen roll, at least one battery, a thermal print head cooperable with the platen roll, and wherein the battery and the electric motor are mounted on the printer circuit board.

73. A portable printer, comprising: an elongate housing having a front portion with an open-ended channel-shaped compartment adapted to slidably receive a data entry device through the open end of the compartment, the compartment having a substantially open top portion, the housing further having a rear portion, the housing providing internal space at the rear portion for receiving a roll of a label web, an elongate printed circuit board disposed in the housing, the printed circuit board having a front portion and a rear portion, a print module mounted to the rear portion of the printed circuit board at the rear portion of the housing, and the print module including a thermal print head and a platen roll cooperable with the print head for printing on the label web, and at least one battery in the housing, and an access opening in the housing between the compartment and the inside of the housing, the battery being accessible through the access opening.

74. A portable printer, comprising: an elongate housing having a front portion with an open-ended channel-shaped compartment adapted to slidably receive a data entry device through the open end of

the compartment, the compartment having a substantially open top portion, the housing further having a rear portion, the housing providing internal space at the rear portion for receiving a roll of a label web, an elongate printed circuit board disposed in the housing, the printed circuit board having a front portion and a rear portion, a print module mounted to the rear portion of the printed circuit board at the rear portion of the housing, the print module including a thermal print head and a platen roll cooperable with the print head for printing on the label web, at least one battery in the housing, an access opening in the housing between the compartment and the inside of the housing, the battery being accessible through the access opening, and a door for the opening movable between closed and open positions.

75. In combination: a portable printer and a portable data entry device connected thereto, the portable data entry device including an elongate data entry device housing having a front end, a scanner disposed at the front end of the data entry device housing for scanning a label, a display and a plurality of manually operable keys, the printer including an elongate printer housing having a front portion with an open-ended channel-shaped compartment adapted to slidably receive the data entry device through the open end of the compartment, the scanner being capable of receiving data through the open end of the compartment, the compartment having a substantially open top portion to enable access to the display and the keys, the printer housing further

having a rear portion, the printer housing providing internal space at the rear portion for receiving a roll of a label web, an elongate printed circuit board disposed in the printer housing, the printed circuit board having a front portion and a rear portion, a print module mounted to the rear portion of the printed circuit board at the rear portion of the printer housing, the print module including a thermal print head and a platen roll cooperable with the print head for printing on the label web, at least one battery in the printer housing, and an access opening in the printer housing between the compartment and the inside of the printer housing, the battery being accessible through the access opening.

D'cnt

76. In combination: a portable printer and a portable data entry device connected thereto, the portable data entry device including an elongate data entry device housing having a front end, a scanner disposed at the front end of the data entry device housing for scanning a label, a display and a plurality of manually operable keys, the printer including an elongate printer housing having a front portion with an open-ended channel-shaped compartment adapted to slidably receive the data entry device through the open end of the compartment, the scanner being capable of receiving data through the open end of the compartment, the compartment having a substantially open top portion to enable access to the display and the keys, the printer housing further having a rear portion, the printer housing providing internal space at

the rear portion for receiving a roll of a label web, an elongate printed circuit board disposed in the printer housing, the printed circuit board having a front portion and a rear portion, a print module mounted to the rear portion of the printed circuit board at the rear portion of the printer housing, the print module including a thermal print head and a platen roll cooperable with the print head for printing on the label web, at least one battery in the printer housing, an access opening in the printer housing between the compartment and the inside of the printer housing, the battery being accessible through the access opening, and a door for the opening movable between closed and open positions.

COPY OF PAPERS
ORIGINALLY FILED

09/384,675

OIPE JC176
AUG 29 2002
PATENT & TRADEMARK OFFICE

PTO/SB 91 (10-98)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

(Also PTO Form 3.76)

DEPOSIT ACCOUNT ORDER FORM

DATE: Aug. 23, 2002

This form is to be used only for orders, the costs of which are to be charged against Patent and Trademark Office Deposit Accounts. IT MUST NOT BE USED FOR orders when payment is made by cash, checks, or coupons. In addition, it should not be used for ordering printed copies of U.S. Patents. Use a separate form for each of the following types of service ordered: Coupons, Recordings, Reproductions, Title Reports, Translations. Mail to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

NAME AND ADDRESS OF DEPOSITOR

Joseph J. Grass, Esq.
Monarch Marking Systems, Inc.
P. O. Box 608
Dayton, OH 45401

FOR OFFICE USE ONLY

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D. C. 20231, on Aug. 23, 2002

Date of Deposit

Joseph J. Grass

Signature

Aug. 23, 2002

Date of Signature

ACCOUNT NUMBER	YOUR ORDER NUMBER
13-3955	

DESCRIPTION OF ARTICLES OR SERVICE TO BE FURNISHED

Application of

Inventors: Gregory B. Arnold et al

Serial No. 09/384,675
Filed: Aug. 27, 1999
Title: PORTABLE PRINTER AND DATA ENTRY DEVICE

It is requested that the additional claim fee of $780.00 for the accompanying claims added by amendment be charged against deposit account 13-3955 of Monarch Marking Systems, Inc. The Commissioner is authorized to charge any additional fees or credit any overpayment to the above account.

RECEIVED
SEP 9 2002
TECHNOLOGY CENTER 2800

If additional space is needed attach separate sheet.

MONARCH MARKING SYSTEMS, INC.

Joseph J. Grass
(signature)

Attorney of Record

For prompt, accurate shipment please complete the following mailing label - please print or type.

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office
Washington, DC 20231
OFFICIAL BUSINESS
Return after five days

YOUR ORDER NUMBER

Joseph J. Grass, Esq.
Monarch Marking Systems, Inc.
(name)
P. O. Box 608
(street address)
Dayton, OH 45401
(city, state, zip code)

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner of Patents and Trademarks, Washington, DC 20231.